

STATEMENT OF BASIS

as required by LAC 33:IX.3109, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0038440; AI 19432; PER20090001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

- I. THE APPLICANT IS:** Village of Loreauville
Loreauville Municipal Sewer Treatment Plant
P.O. Box 336
Loreauville, LA 70552
- II. PREPARED BY:** Afton J. Bessix
- DATE PREPARED:** August 5, 2009
- III. PERMIT ACTION:** Revoke and Reissue LPDES permit LA0038440, AI 19432; PER20090001

LPDES application received: April 8, 2009

LPDES permit issued: April 1, 2006
LPDES permit expired: March 31, 2011

- Although the permit does not expire until 2011, significant change in the flow (0.10 to 0.14 MGD) from the facility is planned before the expiration of the permit. Rather than modify the permit only for it to be reissued soon after, the Department will revoke and reissue the current permit. This is in accordance with LAC 33:IX.3105.A and LAC 33:IX.2903 A.1.a.

V. FACILITY INFORMATION:

- A. The application is for the discharge of treated sanitary wastewater from a publicly owned treatment works serving the Village of Loreauville.
- B. The permit application does not indicate the receipt of industrial wastewater.
- C. The facility is located at 309 Boutte Road in Loreauville, Iberia Parish.
- D. The treatment facility consists of three extended aeration basins with diffused air aeration and final clarifiers. Sludge return by eductors and sludge drying beds. Disinfection is by chlorination.
- E. Outfall 001

Discharge Location: Latitude 30° 4' 3" North
Longitude 91° 44' 7" West

Description: treated sanitary wastewater

Design Capacity: 0.14 MGD

Type of Flow Measurement which the facility is currently using:

Ultrasonic Flow Meter (Totalizing Meter) and Continuous Recorder

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VI. RECEIVING WATERS:

The discharge is into a local drainage ditch; thence into Bayou Teche in segment 060401 of the Vermilion - Teche Basin. This segment is not listed on the 303(d) list of impaired waterbodies.

The designated uses and degree of support for Segment 060401 of the Vermilion - Teche Basin are as indicated in the table below^{1/}:

Overall Degree of Support for Segment 060401	Degree of Support of Each Use						
	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
	Not Supported	Full	Not Supported	N/A	N/A	N/A	N/A

^{1/}The designated uses and degree of support for Segment 060401 of the Vermilion - Teche Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2006 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

VII. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 060401 of the Vermilion - Teche Basin, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated November 17, 2008 from Rieck (FWS) to Nolan (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VIII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

IX. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

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Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Ms. Afton J. Bessix
Water Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

X. PROPOSED PERMIT LIMITS:

Subsegment 060401, Bayou Teche – Keystone Locks and Dam to Charenton Canal, is not listed on LDEQ's Final 2006 303(d) List as impaired. However, subsegment 060401 was previously listed as impaired for phosphorus, nitrogen (Nitrate+Nitrite as N), organic enrichment/low DO, pathogen indicators, suspended solids/ turbidity/siltation, and carbofuran, for which the below TMDL's have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDL's and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDL's have been established for subsegment 060401:

Addendum to the 2000 Bayou Teche TMDL for Biochemical Oxygen-Demanding Substances

According to the Addendum to the 2000 Bayou Teche TMDL, effluent reaeration was not needed for any of the dischargers to the Teche, and effluent dissolved oxygen limitations are therefore not needed. Mass allocations were given for CBOD₅ and Ammonia-Nitrogen for the Village of Loreauville. The limits are as follows: 10 mg/l CBOD₅ / 10 mg/l NH₃-N. Therefore, this discharge will be permitted accordingly.

Total Maximum Daily Load (TMDL) for TSS, Turbidity, and Siltation for the Bayou Teche Watershed

As per the TMDL "Point source loads do not represent a significant source of TSS as defined in this TMDL. Point sources discharge primarily organic TSS, which does not contribute to habitat impairment resulting from sedimentation. Because the point sources are minor contributors, and dischargers of organic suspended solids from point sources are already addressed by LDEQ through their permitting of point sources to maintain water quality standards for DO, the wasteload allocation for point source contributions were set to zero. This TMDL only addresses the landform contribution of TSS/sediment and does not address the insignificant point source contributions." Therefore, TSS limits will be permitted according to the current state policy.

Bayou Teche TMDL for Fecal Coliform

As per the Bayou Teche Fecal Coliform TMDL, "...there will be no change in the permit requirements based upon a wasteload allocation resulting from this TMDL." Therefore, Fecal Coliform effluent limitations will be permitted according to the current state policy.

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Total Maximum Daily Load (TMDL) for the Pesticide Carbofuran in the Mermentau River and Vermilion - Teche River Basins

There are no known point source discharges of Carbofuran in the Mermentau Basin, and therefore no allocation was given to point sources. There is one point source in the Vermilion-Teche (FMC Corp. LA0064360) but they do not discharge Carbofuran. Likewise no allocation was given to point source discharges in the Vermilion - Teche River Basin.

Final Effluent Limits:**OUTFALL 001**

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
CBOD ₅	11.7	10 mg/l	15 mg/l	Limits are set in accordance with the <i>Addendum to the Bayou Teche TMDL for Biochemical Oxygen-Demanding Substances</i> .
TSS	17.5	15 mg/l	23 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.
Ammonia-Nitrogen	11.7	10 mg/l	20 mg/l	Limits are set in accordance with the <i>Addendum to the Bayou Teche TMDL for Biochemical Oxygen-Demanding Substances</i> .

*Concentration limits are used in accordance with LAC 33:IX.2709.F.1.b which states that mass limitations are not necessary when applicable standards and limitations are expressed in other units of measurement. LAC 33:IX.709.B references LAC 33:IX.711 which express BOD₅ and TSS in terms of concentration.

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Other Effluent Limitations:**1) Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5., the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) pH

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C., the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X. PREVIOUS PERMITS:

LPDES Permit No. LA0043605: Issued: April 1, 2006
Expired: May 31, 2011

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Monthly Avg.</u>	<u>Weekly Avg.</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Report	Report	Continuous	Recorder
CBOD ₅	10 mg/l	15 mg/l	2/month	Grab
TSS	15 mg/l	23 mg/l	2/month	Grab
Ammonia-Nitrogen	10 mg/l	20 mg/l	2/month	Grab
Dissolved Oxygen	2 mg/l	---	2/month	Grab
Fecal Coliform Colonies	200	400	2/month	Grab
pH (standard units)	6.0 s.u.	9.0 s.u.	2/month	Grab

The permit contains pollution prevention language.

XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:**A) Inspections**

A review of the files indicates the following inspection was performed during the period beginning April 2007 and ending March 2009 for this facility.

Date: November 16, 2007

Inspector: LDEQ

Findings and/or Violations:

1. The permit is up to date and expires March 31, 2011.
2. Sampling and reporting being done as required.
3. Review of DMR's revealed only four Fecal Coliform excursions and one TSS excursion.
4. The facility has three mechanical extended aeration activated sludge treatment units.
5. The effluent was clear at the time of the inspection.
6. The flow meter was -17.2% in error.
7. Flow design capacity is exceeded during rain events.
8. Facility rarely waste sludge and has never disposed of sludge.
9. Drying beds contain sludge and have never been cleaned out.

B) Compliance and/or Administrative Orders

A review of the files indicate that no recent enforcement actions have been administered against this facility. However, a Warning Letter (Enforcement Tracking No. WE-L-07-0610) was sent to the permittee dated February 8, 2008 referencing areas of concern noted in the inspection report and/or subsequent file review. LDEQ received a letter dated April 21, 2008 from the permittee, which stated that the items that appeared to be unsatisfactory were previously addressed by a follow-up letter dated September 24, 2007 to that inspection

C) DMR Review

A review of the discharge monitoring reports for the period beginning April 2007 through March 2009 has revealed the following violations:

Parameter	Outfall	Period of Excursion	Permit Limit	Reported Quantity
Fecal Coliform	Outfall 001	May 2007	400/100 mL	>1,000 mL
Fecal Coliform	Outfall 001	September 2007	400/100 mL	>1,000 /100mL
TSS	Outfall 001	October 2007	12.5 lbs/day 15 mg/L 23 mg/L	21 lbs/day 30 mg/L 36 mg/L
TSS	Outfall 001	November 2007	12.5 lbs/day 15 mg/L 23 mg/L	37 lbs/day 59 mg/L 76 mg/L
CBOD ₅	Outfall 001	November 2007	8.3 lbs/day 10 mg/L 15 mg/L	8.6 lbs/day 14 mg/L 23 mg/L
TSS	Outfall 001	December 2007	15 mg/L 23 mg/L	16 mg/L 25 mg/L
CBOD ₅	Outfall 001	December 2007	15 mg/L	17 mg/L
TSS	Outfall 001	February 2008	12.5 lbs/day 15 mg/L 23 mg/L	425 lbs/day 397 mg/L 780 mg/L
CBOD ₅	Outfall 001	February 2008	8.3 lbs/day 10 mg/L 15 mg/L	48.7 lbs/day 46 mg/L 89 mg/L
TSS	Outfall 001	March 2008	12.5 lbs/day 15 mg/L 23 mg/L	21 lbs/day 28 mg/L 35 mg/L
Fecal Coliform	Outfall 001	March 2008	200/100 mL 400/100 mL	>1,000/100 mL >1,000/100 mL
TSS	Outfall 001	April 2008	15 mg/L 23 mg/L	18 mg/L 28 mg/L
Fecal Coliform	Outfall 001	April 2008	200/100 mL 400/100 mL	>6,000/100 mL >6,000/100 mL
TSS	Outfall 001	May 2008	12.5 lbs/day 15 mg/L 23 mg/L	24 lbs/day 41 mg/L 76 mg/L
CBOD ₅	Outfall 001	May 2008	10 mg/L 15 mg/L	13 mg/L 23 mg/L
Fecal Coliform	Outfall 001	July 2008	200/100 mL 400/100 mL	245/100 mL 6,000/100 mL
TSS	Outfall 001	August 2008	12.5 lbs/day 15 mg/L	24 lbs/day 19 mg/L

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Fecal Coliform	Outfall 001	August 2008	200/100 mL	245/100 mL
CBOD ₅	Outfall 001	August 2008	8.3 lbs/day	10 lbs/day
TSS	Outfall 001	November 2008	12.5 lbs/day 15 mg/L 23 mg/L	15 lbs/day 32 mg/L 32 mg/L
Fecal Coliform	Outfall 001	November 2008	200/100 mL 400/100 mL	226/100 mL 5,100/100 mL
Fecal Coliform	Outfall 001	December 2008	200/100 mL 400/100 mL	210/100 mL 4,400/100 mL
Fecal Coliform	Outfall 001	January 2009	200/100 mL 400/100 mL	235/100 mL 5,500/100 mL
TSS	Outfall 001	February 2009	12.5 lbs/day 15 mg/L 23 mg/L	34 lbs/day 47 mg/L 66 mg/L
Fecal Coliform	Outfall 001	February 2009	400/100 mL	600/100 mL
CBOD ₅	Outfall 001	February 2009	8.3 lbs/day 10 mg/L 15 mg/L	13.8 lbs/day 19 mg/L 27 mg/L
TSS	Outfall 001	March 2009	12.5 lbs/day 15 mg/L 23 mg/L	313 lbs/day 311 mg/L 607 mg/L
Fecal Coliform	Outfall 001	March 2009	200/100 mL 400/100 mL	245/100 mL 6,000/100 mL
CBOD ₅	Outfall 001	March 2009	8.3 lbs/day 10 mg/L 15 mg/L	26.7 lbs/day 27 mg/L 51 mg/L

- The DMR for August 2007 was missing in EDMS and not available for review.

XII. ADDITIONAL INFORMATION:

The Louisiana Department of Environmental Quality (LDEQ) reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDL's. The LDEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as requested by the permittee and/or as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

In accordance with LAC 33:IX.2903., this permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(c) and (D); 304(b)(2); and 307(a)(2) of the Clean Water Act, if the effluent standard or limitations so issued or approved:

- Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
- Controls any pollutant not limited in the permit; or
- Requires reassessment due to change in 303(d) status of waterbody; or
- Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body.

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Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 0.14 MGD. Also, the dissolved oxygen limit has been removed from the permit based upon the Addendum to the 2000 Bayou Teche TMDL for Biochemical Oxygen-Demanding Substance. Mass allocations were given for the Loreauville POTW and they are as follows: 10 mg/l CBOD₅ / 10 mg/l NH₃-N. Effluent reaeration was not needed for any of the discharges to the Teche, and effluent dissolved oxygen limitations are therefore not needed.

Effluent loadings are calculated using the following example:

$$\text{BOD: } 8.34 \text{ lb/gal} \times 0.14 \text{ MGD} \times 10 \text{ mg/l} = 11.7 \text{ lb/day}$$

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit are standard for facilities of flows between 0.10 MGD and 0.50 MGD.

Effluent CharacteristicsMonitoring Requirements

	<u>Measurement</u>	<u>Sample</u>
	<u>Frequency</u>	<u>Type</u>
Flow	Continuous	Recorder
CBOD ₅	2/month	Grab
Total Suspended Solids	2/month	Grab
Ammonia-Nitrogen	2/month	Grab
Fecal Coliform Bacteria	2/month	Grab
pH	2/month	Grab

Pretreatment Requirements

Based upon consultation with LDEQ pretreatment personnel, general pretreatment language will be used due to the lack of either an approved or required pretreatment program.

Pollution Prevention Requirements

The permittee shall institute or continue programs directed towards pollution prevention. The permittee shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility. The permittee will complete an annual Environmental Audit Report **each year** for the life of this permit according to the schedule below. The permittee will accomplish this requirement by completing an Environmental Audit Form which has been attached to the permit. All other requirements of the Municipal Wastewater Pollution Prevention Program are contained in Part II of the permit.

The audit evaluation period is as follows:

Audit Period Begins	Audit Period Ends	Audit Report Completion Date
Effective Date of Permit	12 Months from Audit Period Beginning Date	3 Months from Audit Period Ending Date

XI. TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to revoke and reissue a permit for the discharge described in this Statement of Basis.

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XII. REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Village of Loreauville, Loreauville Municipal Sewer Treatment Plant, April 8, 2009.